



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,448	09/30/2003	Laxmi P. Parida	YOR920030199US1(590.110)	7560
35195	7590	03/24/2006	EXAMINER	
FERENCE & ASSOCIATES 409 BROAD STREET PITTSBURGH, PA 15143			TRAN, MAI T	
			ART UNIT	PAPER NUMBER
			2129	
DATE MAILED: 03/24/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/676,448		PARIDA ET AL.	
	Examiner		Art Unit	
	Mai T. Tran		2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to application 10/676448, filed September 30, 2003.

Claims 1-9 are presented for examination.

SPECIFICATION

The disclosure is objected to because of the following informalities:

- ❖ On page 6, line 2: "The collection of objects from U that posses". Posses is spelled incorrectly.
- ❖ On page 9, line 10: " $(2.5 < v < 3.2)$ ". This expression is mathematically incorrect with Applicants' disclosure $((v > 2.5) \wedge (v < 3.2))$.
- ❖ On page 11, line 13: "the cost being minimzed". Minimzed is spelled incorrectly.

Appropriate correction is required.

CLAIM REJECTIONS - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The invention as disclosed in claims 1-9 is directed to non-statutory subject matter.

2. None of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. § 101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999).

Specially, the Federal Circuit held that the act of:

...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicants' "classifying objects" references are just such abstract ideas.

3. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price*, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result' -- *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades*. (emphasis added) *State Street Bank* at 1601.

4. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se* statutory. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."
5. The court was being very specific.

6. Additionally, the court was also careful to specify that the “useful, concrete and tangible result” it found was “a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer – i.e., “post-processing activity”).

7. Applicants cite no such specific results to define a useful, concrete and tangible result. Neither do Applicants specify the associated practical application with the kind of specificity the Federal Circuit used.

8. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating ‘abstract ideas’ or ‘natural phenomena’ ... As the Supreme Court has made clear, ‘[a]n idea of itself is not patentable, ... taking several abstract ideas and manipulating them together adds nothing to the basic equation’. In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

9. Since the Federal Circuit held in *Warmerdam* that this is the “dispositive issue” when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is “useful, concrete, and tangible” in similar cases. Accordingly, the Examiner finds that Applicants manipulated a set of abstract “classifying objects” to solve purely algorithmic problems in the abstract (i.e. what *kind* of “objects” is used? mathematical objects? linear objects? 3D objects?) Clearly, a claim for manipulation of “classifying objects” is provably even more abstract (and thereby less limited in practical application) than pure “mathematical algorithms” which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

Art Unit: 2129

10. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.
11. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of “useful, concrete, and tangible” the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a “useful, concrete and tangible result”. There is only manipulation of abstract ideas.
12. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

Finally, the decision in *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is not to the contrary. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that ‘taking several abstract ideas and manipulating them together adds nothing to the basic equation’; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court’s conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

13. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the “useful, concrete, and tangible” nature of a set of claims under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.
14. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicants’ phrase “objects; Boolean expression” is simply an abstract construct that does not limit the claims to the transformation of real world data (such as monetary data or heart rhythm data) by some disclosed process. Consequently, the

necessary conclusion under *AT&T*, *State Street* and *Warmerdam*, is straightforward and clear. The claims take several abstract ideas (i.e., “objects, Boolean expression” in the abstract) and manipulate them together adding nothing to the basic equation. Claims 1-9 are thereby, rejected under 35 U.S.C. §101.

CLAIM REJECTIONS - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the MPEP puts it:

“The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112.”; In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) (“Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**”) See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-9 are rejected on this basis.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 8 recite the limitation “the boolean express” in line 15 and line 12 respectively. There is insufficient antecedent basis for this limitation in the claim.

CLAIM REJECTIONS - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by "Classification to Ordinal Categories Using a Search Partition Methodology with An Application in Diabetes Screening", by Roger J. Marshall, Statistics In Medicine, 1999, hereafter Marshall.

Claim 1

Marshall teaches a system for classifying objects, the system comprising;
an arrangement for formulating a query to identify objects having properties of interest (page 2724, paragraph 2);
an arrangement for selecting properties of the objects to compare with object properties included in the query (pages 2724-2726, paragraph 3); and
an arrangement for determining if based on the selected properties if object belongs in the query (pages 2724-2726, paragraph 3).

Claim 2

The system of claim 1, wherein the selection of properties of objects to compare with object properties included in the query is made determined in conjunction with a determination of the Boolean expression of the properties (page 2727, paragraph 4.2).

Claim 3

The system of claim 2, wherein the Boolean expression is an optimized expression of the expression that best defines the query (page 2727, paragraph 4.2).

Claim 4

The system of claim 3, wherein the optimization of the boolean express is accomplished by minimizing the error of the expression which defines the query (page 2728, paragraph 5.1).

Claims 5-8

This is a method version of the claimed system discussed above, in claims 1-4, wherein all claimed limitations have also been addressed and cited as set forth above.

Claim 9

This is a computer program product version of the claimed system discussed above in claim 1, wherein all claimed limitations have also been addressed and cited as set forth above.

CONCLUSION

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Neeman et al, U. S. Patent No. 5,519,855, discloses summary catalogs.
2. Seagraves, Gerald C., U. S. Patent No. 5,652,880, discloses an apparatus and a method for storing, retrieving and presenting objects with rich links.
3. Zbikowski et al, U. S. Patent No. 5,878,410, discloses a file system sort order indexes.
4. Straforini et al, U. S. Patent No. 6,092,059, discloses an automatic classifier for real time inspection and classification.

5. Ganguly et al, U. S. Patent No. 6,345,266, discloses predicate indexing for locating objects in a distributed directory.
6. Althoff et al, U. S. Patent No. 6,374,252, discloses modeling of object-oriented database structures, translation to relational database structures, and dynamic searches thereon.
7. Rosenthal et al, US-PGPub 2002/0133502, discloses a method and system for interactive collection of information.
8. Shi et al, U. S. Patent No. 6,625,615, discloses a data processing system and method for multi-level directory searches.
9. Gupta et al, US-PGPub 2004/0059719, discloses methods, computer programs and apparatus for caching directory queries.
10. Srinivasan et al, U. S. Patent No. 6,834,286, discloses a method and system for representing and accessing object-oriented data in a relational database system.
11. "A Program to Implement a Search Method for Identification of Clinical Subgroups", Roger J. Marshall, Statistics in Medicine, vol. 14, 2645-2659, 1995.
12. "Boolean Query Mapping Across Heterogeneous Information Sources", Chen-Chuan Chang, K.; Garcia-Molina, H.; Paepcke, A.; Knowledge & Data Engineering, IEEE Transactions on, Vol. 8, No. 4, Aug. 1996, pages: 515 - 521.
13. "Generation of Boolean classification rules", Roger J. Marshall. Proceedings of Computational Statistics 2000. Utrecht. Eds JG Bethlehem and PGM van der Heijden. Springer-Verlag.

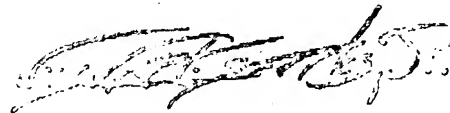
CORRESPONDENCE INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mai T. Tran whose telephone number is (571) 272-4238. The examiner can normally be reached on M-F 9:00am-- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.T.T
Patent Examiner
Date: 3/10/2006



Wilbert L. Starks
Primary Examiner
Tech Center 2100